	Application No.	Applicant(s)
Notice of Allowability	10/717,007	BURCKART ET AL.
	Examiner	Art Unit
	VAN H. NGUYEN	2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the Appeal Brief filed 05/20/2008 and the telephonic interview on 08/01/2008.*

2. ☒ The allowed claim(s) is/are *1, 3-8, 10, 11, 13-15, 17, 18, and 20 (now renumbered 1-15).*

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

      a) ☐ All   b) ☐ Some*   c) ☐ None of the:

          1. ☐ Certified copies of the priority documents have been received.

          2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

          3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194

DETAILED ACTION

1.   This communication is responsive to the Appeal Brief filed 05/20/2008 and the
telephonic interview on 08/01/2008.

Claims 1, 3-8, 10, 11, 13-15, 17, 18, and 20 have been examined and allowed.

2.   **EXAMINER'S AMENDMENT:**

An examiner's amendment to the record appears below. Should the changes
and/or additions be unacceptable to applicant, an amendment may be filed as
provided by 37 CFR 1.312. To ensure consideration of such an amendment, it
MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview
with Mr. Scott D. Paul (Registration No. 42, 984) on 08/01/2008.

The application has been amended as follows:

In the Claims:

**This listing of claims will replace all prior versions, and listings, of claims in the
application:**

1. (Currently Amended) A system for port and protocol sharing comprising:

  a processor;

  a memory connected to the processor;

  a layered hierarchy of application processes and protocols;

  an interlayer communications process disposed between each layer in said layered hierarchy; and,

  a communications layer programmed to moderate access by all of said application processes and protocols in said layered hierarchy to a single logical port,

  wherein each said interlayer communications process comprises:

  a list of application process and protocols coupled to said interlayer communications process at a next higher level in said hierarchy; and,

  at least one discrimination process programmed to select a particular one of said application processes and protocols in said list to which to route selected incoming traffic, and

  wherein said at least one discrimination process comprises at least one selectable discrimination algorithm based upon at least one attribute associated with at least one of said application processes and protocols.

2. (Canceled)

3. (Original) The system of claim 1, wherein said communications layer comprises a

process programmed to map incoming traffic in said single logical port to selected ones of said application process and protocols.

4. (Canceled)

5. (Currently Amended) The system of claim [[4]] 1, wherein said at least one attribute comprises an attribute selected from the group consisting of a number of layers of application processes and protocols disposed within said hierarchy above said interlayer communications process, a weighting of said application processes and protocols in said list;

      a catch-all to handle applications and protocols in said list which are not selective in nature, previous context characteristics for said applications and protocols in said list, and overall system characteristics.

6. (Currently Amended) The system of claim [[2]] 1, wherein said at least one selectable discrimination algorithm comprises a pluggable discrimination algorithm.

7. (Currently Amended) In a hierarchy of layered applications and corresponding protocols, a port and protocol sharing method comprising the steps of:

      receiving traffic over a single shared logical port and routing said traffic to an interlayer communications process disposed between two layers in the hierarchy;

applying a discrimination algorithm to select ~~selecting~~ a particular

application/protocol layer in a higher one of said two layers to which said traffic is to be

routed; ~~and,~~

routing said traffic to said selected particular application/protocol layer;

adding an additional application/protocol layer to the hierarchy;

replacing said discrimination algorithm with another discrimination algorithm

programmed to consider said additional application/protocol layer during said selection

process;

considering said additional application/protocol layer in said selecting step;

when selected, routing said traffic to said additional application/protocol layer;

and

performing said adding and replacing steps without decoupling or disabling other

applications and protocols in the hierarchy.

8. (Original) The method of claim 7, further comprising the steps of further selecting a

subsequent application/protocol layer in a higher one of two other layers to which said

traffic is to be routed; and,

routing said traffic to said further selected particular application/protocol layer.

9. (Canceled)

10. (Original) The method of claim 7, wherein said selecting step comprises the step of
selecting a particular application/protocol layer based upon at least one attribute of said
particular application/protocol layer selected from the group consisting of a number of
layers of application processes and protocols disposed within the hierarchy above said
interlayer communications process, a weighting of said application processes and
protocols;

a catch-all to handle individual ones of said applications and protocols which are
not selective in nature, previous context characteristics for said applications and
protocols, and overall system characteristics.

11. (Currently Amended) A computer-implemented method for augmenting a hierarchy
of layered applications and corresponding protocols, the method comprising the steps of:

applying a discrimination algorithm to a selection process in which a particular
application/protocol layer in a listing of adjacent application/protocol layers is selected to
receive traffic flowing through the hierarchy;

inserting a new application/protocol layer adjacent to said particular
application/protocol layer in the hierarchy;

adding said new application/protocol layer to said listing; ~~and~~,

replacing said discrimination algorithm with another discrimination algorithm
programmed to consider said new application/protocol layer during said selection
process, and

performing said inserting, adding and replacing steps without decoupling or disabling other applications and protocols in the hierarchy.

12. (Canceled)

13. (Original) The method of claim 11, wherein said applying step comprises the step of applying said discrimination algorithm to select a particular application/protocol layer based upon at least one attribute of said particular application/protocol layer selected from the group consisting of a number of layers of application processes and protocols disposed within the hierarchy, a weighting of said application processes and protocols;

a catch-all to handle individual ones of said applications and protocols which are not selective in nature, previous context characteristics for said applications and protocols, and overall system characteristics.

14. (Currently Amended) A machine readable storage having stored thereon a computer program for port and protocol sharing in a hierarchy of layered applications and corresponding protocols, the computer program comprising a routine set of instructions which when executed by a machine cause the machine to perform the steps of:

receiving traffic over a single shared logical port and routing said traffic to an interlayer communications process disposed between two layers in the hierarchy;

applying a discrimination algorithm to a select ~~selecting~~ a particular

application/protocol layer in a higher one of said two layers to which said traffic is to be

routed; ~~and,~~

routing said traffic to said selected particular application/protocol layer;

adding an additional application/protocol layer to the hierarchy;

replacing said discrimination algorithm with another discrimination algorithm

programmed to consider said additional application/protocol layer during said selection

process;

considering said additional application/protocol layer in said selecting step;

when selected, routing said traffic to said additional application/protocol layer;

and

performing said adding and replacing steps without decoupling or disabling other

applications and protocols in the hierarchy.

15. (Original) The machine readable storage of claim 14, further comprising the steps of

further selecting a subsequent application/protocol layer in a higher one of two other

layers to which said traffic is to be routed; and,

routing said traffic to said further selected particular application/protocol layer.

16. (Canceled)

17. (Original) The machine readable storage of claim 14, wherein said selecting step comprises the step of selecting a particular application/protocol layer based upon at least one attribute of said particular application/protocol layer selected from the group consisting of a number of layers of application processes and protocols disposed within the hierarchy above said interlayer communications process, a weighting of said application processes and protocols;

a catch-all to handle individual ones of said applications and protocols which are not selective in nature, previous context characteristics for said applications and protocols, and overall system characteristics.

18. Currently Amended A machine readable storage having stored thereon a computer program for augmenting a hierarchy of layered applications and corresponding protocols, the computer program comprising a routine set of instructions which when executed cause the machine to perform the steps of:

applying a discrimination algorithm to a selection process in which a particular application/protocol layer in a listing of adjacent application/protocol layers is selected to receive traffic flowing through the hierarchy;

inserting a new application/protocol layer adjacent to said particular application/protocol layer in the hierarchy;

adding said new application/protocol layer to said listing; ~~and~~,

replacing said discrimination algorithm with another discrimination algorithm programmed to consider said new application/protocol layer during said selection process, and

performing said inserting, adding and replacing steps without decoupling or disabling other applications and protocols in the hierarchy.

19. (Canceled)

20. (Original) The machine readable storage of claim 18, wherein said applying step comprises the step of applying said discrimination algorithm to select a particular application/protocol layer based upon at least one attribute of said particular application/protocol layer selected from the group consisting of a number of layers of application processes and protocols disposed within the hierarchy, a weighting of said application processes and protocols;

a catch-all to handle individual ones of said applications and protocols which are not selective in nature, previous context characteristics for said applications and protocols, and overall system characteristics.

3.   **REASONS FOR ALLOWANCE:**

Claims 1, 3-8, 10, 11, 13-15, 17, 18, and 20 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not expressly teach or render obvious the invention as recited in independent Claims 1, 7, 12, 14, and 18.

The features:

- *"at least one discrimination process programmed to select a particular one of the application processes and protocols in the list to which to route selected incoming traffic, and wherein the at least one discrimination process comprises at least one selectable discrimination algorithm based upon at least one attribute associated with at least one of the application processes and protocols"* (as recited in independent Claim 1);

- *"replacing the discrimination algorithm with another discrimination algorithm programmed to consider the additional application/protocol layer during the selection process; considering the additional application/protocol layer in the selecting step; when selected, routing the traffic to the additional application/protocol layer; and performing the adding and replacing steps*

> *without decoupling or disabling other applications and protocols in the*
>
> *hierarchy"* (as recited in independent Claims 7 and 14); and

- *"replacing the discrimination algorithm with another discrimination algorithm*

  programmed to consider the new application/protocol layer during the selection

  process, and performing the inserting, adding and replacing steps without

  decoupling or disabling other applications and protocols in the hierarchy" (as

  recited in independent Claims 12 and 18),

when taken in the context of the claims as a whole, were not uncovered in the prior art

teachings.

Dependent claims are allowed as they depend upon allowable independent claims.

Any comments considered necessary by applicant must be submitted no later than

the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments

on Statement of Reasons for Allowance."

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner
should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The
examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
MENG-AI AN can be reached at (571) 272-3756.

The fax phone number for the organization where this application or proceeding is assigned
is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published
applications may be obtained from either Private PAIR or Public PAIR. Status information
for unpublished applications is available through Private PAIR only. For more information
about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access
to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197
(toll-free). If you would like assistance from a USPTO Customer Service Representative or
access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or
571-272-1000.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194